

# EPP Buyer Update

Volume 11, February 2005

## Who are the Commonwealth's Brightest Bulbs?



Paraphrasing on an old joke, the OSD EPP program recently researched the question, "*How much does it cost for a state employee to change a light bulb?*" The answer is, for the smart buyer it will cost over 50 to 90% less than it used to! In Fiscal Year 2004, the smart buyers across the Commonwealth purchased over 6500 compact fluorescent light bulbs (CFLs) which are just as bright

but have a longer lifespan and smaller energy consumption. As a result, they saved \$140,000 in the first year and over \$625,000 before they had to replace those CFLs!

Well, you may say, everybody knows that at the purchase point CFLs are more expensive than regular incandescent bulbs. Where are these savings coming from? The answer is twofold:

- **CFLs consume 3 or 4 times less energy** than incandescents, cutting the lighting energy bill by just as much.
- **CFLs also "live longer,"** about 10,000 hours each compared to the 1,000-hour lifespan of a traditional incandescent. This means 10 times less bulb replacement work and staff time freed up to do more productive things.

Based on the results of the Energy Star Savings Calculator available on the [Energy Star website](#) the payback period for the extra purchase price of a twist-on CFL is just about 2.5 months! Some of the assumptions behind this figure are the electricity rate of \$.10, labor rate for changing the bulbs of \$20/hour, and the bulb "on" time of 10 hours/day.

Your electricity rate may be lower and you may not have those light bulbs on ten hours a day, but in any case there are better things for your employees to do than replace them. Save them some headache and some money for your department. FAC22 statewide contractors also offer programs that provide utility rebates on certain types of compact fluorescents and light fixtures. Talk to them about compact fluorescents or schedule a free facility audit to generate even more savings. The brightest bulbs in the Commonwealth belong to the smart buyers!

## FAQs

### What is better for the environment, paper towels or electric hand dryers?

In 2001, a UK-based environmental consulting firm Environmental Resources Management conducted a Life Cycle Assessment (LCA) to answer the question.



The study, commissioned by two hand drier manufacturers, took into account environmental impacts of product manufacturing, transportation of all materials, generation and supply of electricity for the dryer and disposal of paper towels.

The LCA determined that electric driers have a smaller negative impact on the environment. Over its lifetime, a drier creates a global warming burden of 1.6 tons of CO<sub>2</sub>, or as much as a car traveling 5,100 km. To perform the same amount of drying, a paper towel system creates a burden of 5.4 tons of CO<sub>2</sub>, or as much as a car traveling 14,500 km. The study assumed that two paper towels are used per dry, and that the hand drier is used for 30 seconds per dry. [View the study](#) [Adobe PDF] for more information.

## Also In This Issue:

- **Focus on Appliances:** How to buy an efficient clothes washer
- **Fighting E-Waste:** Set up a cell phone disposal program for your agency and... make a few bucks

## Focus on Appliances

We are continuing the discussion on purchasing efficient appliances, which we started in earlier issues.

## How to Buy a Clothes Washer

By One Hwang, Operational Services Division

Today, appliances like clothes washers are able to perform more and use less. Many of them drastically reduce your water and energy usage, which translates in significant savings on your bills:

- Water (to do the washing),
- Electrical (to run the machine the internal water heater for some machines),
- Oil or gas (to heat the water if your machine is connected to the hot water line).

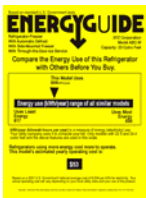


This article will help you find the machine that will save you the most.

### Choose features carefully

- **Choose front-load.** In a front-load washer, only the bottom of the tub is filled with water, and a horizontal axis basket lifts and drops the clothing into water instead of having to submerge them in a tub full of water. That is why top-loaders use 45-60 gallons per wash while front-loaders need only 17-26 gallons. In addition to water, front load washers save you on energy or gas needed to heat it.
- **Look for sensors and adjustable settings.** In order not to waste water on smaller loads, some washers have sensors that automatically adjust water and suds levels. On other machines you can perform the same operations manually.

### Select the most efficient model



**Compare the yellow Energy Guide labels**, which are required by law to be placed on all washers. Each label not only displays the annual operating cost and energy consumption of the particular appliance, but it also charts where the appliance stands in comparison with similar ones with regard to energy consumption.

Keep in mind that the chart compares front-loading models with other front loaders and not with the conventional top-loading clothes washers.



**Look for the Energy Star® label**, which identifies those clothes washers that use 35-50% less water and 50% less energy per load than the conventional clothes washer.

**Check the list of Top-Rated Energy Efficient Washers.** The American Council for an Energy Efficient Economy publishes this list online at <http://www.aceee.org/consumerguide/topwash.htm>

### Subscription Information

The EPP Buyer Update newsletter is published by the Environmentally Preferable Products Purchasing Program at the Massachusetts Operational Services Division. Visit us online, subscribe and unsubscribe at <http://www.mass.gov/epp>.

## Energy conservation tips

- Clothes washers are most efficient when fully loaded. Wash only when there is a full load, but remember not to overstuff.
- Wash clothes in cold water while using cold-water detergents whenever possible, and only use hot-water for very dirty loads or for when sanitizing is required.
- Choose high-speed spin cycles. Water is extracted quicker, and the drying time is reduced.

### Cost savings sample

To check whether it makes economic sense to follow the article's advice, we selected two machines of the same size available on statewide contract FAC27: a standard top-loader and an Energy Star® front-loader and used the Energy Star® calculator for washers to perform a cost analysis. The estimates show that buying an Energy Star® front-loader, although it may be more expensive upfront, would allow you to **save over \$500** over the lifetime of the appliance.

	Standard Top-Loader	Energy Star® Front-Loader
Initial Cost	\$569	\$799
Ann'l Energy Use	601 kWh	273 kWh
Ann'l Water Use	23,494 gallons	10,181 gallons
Ann'l Electric Cost	\$48	\$22
Ann'l Water Cost	\$98	\$42
Lifetime Utilities Cost	\$1367	\$604
<b>Total Cost Savings</b>		<b>\$534</b>

Assumptions: washer size 3.5 cu. ft, 392 loads/year, 12 years lifetime, electric water heating at \$0.08/kWh, 4% discount rate, and combined water and sewer price of \$4.16/1,000 gallons. Standard model: GE Model # WWRE6260DWW, Energy Star® front-loader: Maytag Model # MAH55FLBWQ.

*One Hwang is an Environmental Purchasing Intern at OSD. She is an engineering graduate of Harvey Mudd College.*

## Fighting E-Waste

### Set up a cell phone disposal program and... make a few bucks

Now that consumers can switch service providers without changing the phone number, we are tempted to switch cell phones more often than that average "every 18 months." Old handset disposal is a growing problem, due to the toxic substances contained in some of their parts. Consult the updated [Environmentally Sound Disposal Options for Cellular Phones and Rechargeable Batteries](#) [Adobe PDF] document have been updated on our website and organize a no-cost cell phone collection program in your agency. Some of the options will benefit a charity of your choice while some of them will send you a check for the residual value of the equipment collected.